ASL

Australian Society for Limnology Inc.

NEWSLETTER

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AUSTRALIAN SOCIETY FOR LIMNOLOGY INC.

The Australian Society for Limnology Inc. (ASL) is an Australian-based scientific society whose focus is the study and management of inland waters. The ASL was established in 1961, and has a current membership of over 650 researchers, managers, engineers, teachers and tertiary level students from all states and territories. Members have a strong professional interest in inland aquatic issues, including the maintenance of biodiversity, the maintenance and/or restoration of water quality, and the wise use of aquatic resources. The Society also has a strong interest in fostering the scientific and intellectual development of tertiary students.

The Society includes members working in government agencies, tertiary institutions and many industries related to aquatic resources. Through their daily activities, members have contact with local communities and are in a sound position to interpret and advise on inland water issues. The Society has a substantial knowledge base, and has assumed a responsibility to ensure that this is available to those who manage inland waters.

Accordingly, the charter of the ASL is to further our understanding of Australia's inland waters and to promote their wise use and sustainable management. In this manner we will contribute to the continued existence of this valued resource and the maintenance and enhancement of the quality of life for all Australians. The ASL regularly produces a newsletter with notes on limnological activities, articles of interest, book reviews and announcements of upcoming events likely to be of interest to Members.

ASL Home Page - http://www.asl.org.au/

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EDITOR'S NOTE

Well folks, I apologize for the delay with the last few editions, but we are now back on track .... well, kind of. I would love to have some more submissions to work with, especially in the 'Reports from the Trenches' section ... tell us all what you're up to!! And despite that famous Aussie reputation for irreverent humour and salacious gossip, I see no such thing. I'm a NZer, I'm allowed to not be amusing ... for most of our other readers there is a social stereotype to live up to.

I write to you having recently returned from the NABS conference in Salt Lake City (see my Conference Report later on) and from a trip to China. The latter was particularly interesting ... to see the real issues for aquatic ecology that are being generated by intense economic growth. I went expecting to be overwhelmed by the problems. Instead I was impressed by the efforts made by aquatic ecologists to address major environmental issues proactively. The environmental engineering research we saw was particularly impressive, but the fundamental ecology was also very advanced. Perhaps China can do development smarter than we in the West have .... we can only hope so.

I want to draw everyone's attention to the announcement of our next conference on page 6. This is sure to be an exciting event. For the students, I would particularly draw your attention to a new event for ASL .... the student workshop on the afternoon before the main conference. I hope that a great many students can attend .... it's something that I feel really represents ASL's commitment to the next generation of aquatic ecologists.

The deadline for submissions to the next issue is 25th September.

Ross Thompson

School of Biological Sciences

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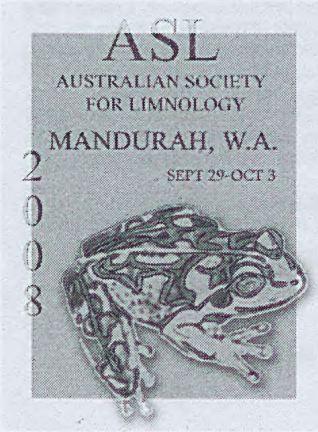
ANNOUNCEMENTS

47th Australian Society for Limnology Congress

Mandurah: 30th Sept to 2nd Oct, 2008



Raising the profile: ensuring aquatic ecosystems remain on Australia's water management agenda

The congress will be held at the beautiful facilities of the Mandurah Performing Arts Centre located on the banks of the Peel-Harvey estuary. The congress provides a fantastic opportunity to hear, contribute and learn about the latest scientific research into inland waters. The Organising Committee welcomes interested participants from the community including NRM groups, Friends groups, NGO's, national, state and local government agencies, universities, research organizations and industry.

To Register

To register for this congress, please visit **www.asl.org.au/events** . You can register for the day or for the full event. A range of post-conference field trips are also available.

- Early-bird registration closes on **15th August**
- Late registrations close on **22nd September**
- Very late registrations possible up to **30th September 2008** (but will incur an additional late fee)

To Submit an Abstract

Please submit abstracts for oral presentations and posters through the website **www.asl.org.au/events** by the **15th August 2008**.

The ASL Congress is the focal event in Australia for freshwater scientists, managers, consultants, educators and community groups. If you have an interest in inland aquatic systems, including wetlands, lakes, reservoirs, billabongs, streams, rivers, estuaries and salt lakes, then we urge you to attend.

Enquiries: Dr Bea Sommer,
School of Natural Sciences,
Edith Cowan University,
Tel. (08) 6304 5561,
Email: b.sommer@ecu.edu.au

ATTENTION ALL ASL STUDENTS

AUSTRALIAN SOCIETY FOR LIMNOLOGY 47TH ANNUAL CONGRESS – Graduate Student Workshop

On the Monday afternoon preceding the ASL conference there will be a special workshop for student members of ASL. After some mixing and mingling there will be a series of short presentations showing various career paths in limnology, including policy, adademia and consultancy. This will be followed by an open panel discussion and then some further mixing and mingling. This is a free event organised by ASL. So when you are planning your flights .... bear this in mind!!!

For more details contact: **Rebecca McIntyre** (mcintr01@student.uwa.edu.au)
or
Ross Thompson (ross.thompson@sci.monash.edu.au)

ASL STUDENT TRAVEL AWARDS

Applications are invited from research students for travel assistance to attend and present a paper at the Annual Congress of the Australian Society for Limnology. The purpose of this assistance is to encourage students to present the results of their work in public. Students who are carrying out research in any branch of limnology for a higher degree are encouraged to apply. The following rules apply for assistance:

1. Applicants must be full-time postgraduate students at any Australian University, College of Advanced Education or Institute of Technology. There is no age limitation. Applicants must have current financial membership of the ASL for at least 6 months.

2. Assistance will be granted on the recommendation of a panel of three appointed by the Society.

3. Applications must include a written statement of no more than 200 words describing the research, its significance and the stage that has been reached. This

statement must be endorsed by the student's supervisor. An abstract of the paper that the applicant proposes to present must also be included.

4. Award of assistance will be judged on: (I) significance of the work; (ii) originality and soundness of the research; (iii) the progress made and whether the stage has been reached where something useful can be presented; (iv) ability to present a clear and concise statement of the study.

5. Applications must be lodged with **Dr Richard Marchant**, Museum of Victoria, 71 Victoria Crescent, Abbotsford, VIC 3067 by 25 August 2008 .

STUDENT PRIZES

At the Annual Congress, there will be three student prizes. The prizes are:
1. For the best oral presentation by a Ph.D or Masters student.
2. For the best poster presentation by a student.
3. For the best oral presentation by an Honours student.

Posters will be assessed during the dedicated poster session and must be attended by the author, who will explain the presentation and field questions. There will be no oral sessions concurrent with the poster session.

The Honours prize was felt desirable because for a number of years members have felt that recent Honours graduates are less experienced at oral presentations and are therefore disadvantaged compared with other graduate students who have nearly completed their research. We hope this prize will encourage recent Honours graduates to attend Congresses and share their results with other members of ASL.

To be eligible for a student prize, students should be current, financial members of ASL, and must give their presentation within 18 months of receiving their degree. The student prizes will be judged by a committee or committees convened by the ASL Executive at the Congress. Wherever possible, such committees will not contain supervisors or Co-authors of candidates for the prizes.

BILL WILLIAMS TRAVEL SCHOLARSHIP (BWTS)

Applications are invited from research students for financial assistance in the form of the Bill Williams Travel Scholarship (BWTS) to enable them to present a paper or poster at an overseas conference, symposium or workshop. Bill Williams was a founding member of the Australian Society for Limnology, a leading pioneer of limnological research in Australia and widely known both inside and outside the country for his advocacy of the study of inland waters. He was very conscious of the need to encourage international exchange amongst limnologists, hence the inauguration of this scholarship.

The purpose of this scholarship is to enable research students to present their work in an international forum. Students who are carrying out research in any branch of limnology for a postgraduate degree (but not an Honours degree) are eligible to apply. The following rules apply:

1. Applicants must be current postgraduate students at any Australian University or have submitted their thesis within 12 months of applying for the BWTS.

2. Applicants must have been members of the ASL for at least 12 months and have current financial membership.

3. The BWTS will be awarded by a committee consisting of the ASL President, the ASL Treasurer, and a representative of the Bill Williams Memorial Committee.

4. Applications must include a written statement (no more than one A4 page) describing the research, its significance, and the stage that has been reached. The statement must be endorsed by the student's supervisor, who should confirm that the student has reached a stage where something useful can be presented. An abstract of the paper that the applicant proposes to present must also be included, and the presentation must acknowledge the scholarship in full. A CV should be included.

5. Applicants must submit a budget indicating the various costs of their trip. This should indicate how the scholarship will be used and what other support they hope to obtain. The intention is that the scholarship will cover a substantial amount of their costs, e.g. an airfare.

6. Award of the scholarship will be judged on: (i) significance of the work; (ii) originality and soundness of the research; (iii) the progress made; (iv) ability to present a clear and concise statement of the study.

One scholarship will be awarded next financial year (2008-09). Applications should be sent by **31 August 2008** to:

Dr R.Marchant,
ASL Secretary,
Museum of Victoria,
GPO Box 666E,
Melbourne VIC 3001

ASL MEDAL - CALL FOR NOMINATIONS

The Australian Society for Limnology Medal commemorates Hilary Jolly, a founding member of the Australian Society for Limnology, and is presented to a person who in the opinion of the Society, has made an outstanding contribution to Australian Limnology. The ASL Medal (formerly the Jolly Award) has become ASL's (and arguably Australia's) most prestigious prize in limnology, considered by members to indicate overall scientific excellence and outstanding achievement.

Any person may be nominated for the Medal, but nominations may only be made by financial members of the Society. The nomination must be in writing and must be seconded by a financial member of the Society. Naminotions must address the relevant selection criteria and a current copy of the nominee's CV should be included if deemed appropriate. Each nomination will be assessed by a Committee of the ASL.

An award is not necessarily made each year. Nominations for the Medal are accepted at any time, but nominations should be made at least three months before the annual Congress. **For consideration for the 2008 Congress, the closing date for nominations is Friday 30 June 2008.**

JOB ANNOUNCEMENT: *Aquatic Ecologist (Statistician) – DPO 2/3, location negotiable*

Pos No: 9399

Total remuneration package valued to: $89,840 p.a. ($64,827-$81,414 salary).

The Environmental Evaluation & Performance Branch within the Water Management Division is seeking applications for the above position.

PRIMARY OBJECTIVES

This position contributes specialist expertise in the areas of aquatic ecology, ecosystem function and statistical analysis to the water sharing plans focussing on the likely impacts, both positive and negative, to river health brought about by land use, water management change and climatic variability and change.

KEY RESPONSIBILITIES

- Contribute specialist expertise in the areas of aquatic ecology, ecosystem function and statistical analysis.
- Acquire, analyse and interpret complex datasets relating to river health.
- Research, define and contribute scientific understanding to underpin the development of standards, best practice and water policy appropriate to river management.
- Plan, monitor, and manage projects and contracts.
- Value add and transfer knowledge and skills in the areas of aquatic ecology, ecosystem function and statistical analysis to achieve better natural resource management.
- Provide a focus for advice and training to internal and external clients in the areas of aquatic ecology, ecosystem function and statistical analysis.
- Provide support to junior staff to ensure quality work outcomes are delivered and assist in the development of these staff.

SELECTION CRITERIA

The successful applicant will have:

- Relevant degree level tertiary qualification in science, mathematics, natural resources or related discipline.
- Comprehensive understanding of both the principles, theories and their practical application in the areas of: a) aquatic ecology relating to river management and b) the use of statistics to analyse complex ecological datasets.
- Sound understanding of sustainable water resource management and the use of hypothesis testing in determining the success of water management actions to improve river health.
- Sound knowledge of the general legislative, regulatory and policy requirements applicable to river management.
- Understanding of project management principles and an ability to apply these to the work situation.
- Proven ability to work as part of a team, promote team co-operation and provide encouragement.
- Excellent written and oral communication.
- Experience in presenting complex information to an audience and preparing scientific reports/papers.
- Common selection criteria also apply.

APPLICATIONS

Applications Marked 'Confidential' To: **Recruitment Services, Corporate Shared Services, PO Box 3720, Parramatta NSW 2124.**

Inquiries to: Bruce Cooper, A/Director Environmental Evaluation & Performance Branch
TEL (02) 9895 7992 EMAIL: bruce.cooper@dnr.nsw.gov.au .

Closing date: **5pm 6 June 2008**

PRELIMINARY ANNOUNCEMENT

REBIRTH OF TAXONOMIC WORKSHOP AT ALBURY-WODONGA

National Taxonomy Hub

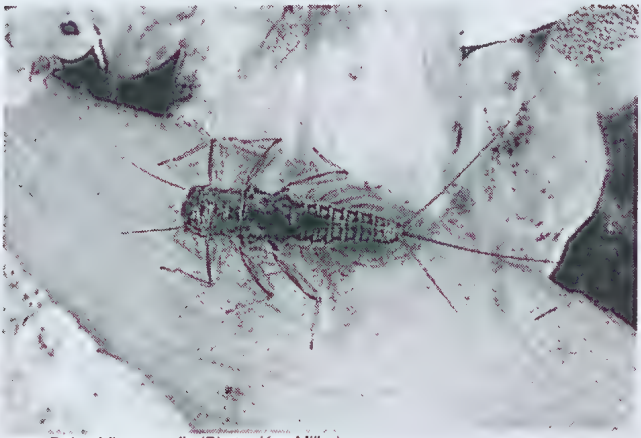
Aquatic Macroinvertebrates CERF Research Project

Date: February 10th – 11th 2009

Where:La Trobe University, Albury-Wodonga Campus Wodonga

Topics:Larval Chironomidae,
Nymphs of Coloburiscidae and taxonomic updates
The Web Guide
Interactive key to Family for adult insects

Preliminary details and registration form available at
http://www.latrobe.edu.au/deme/aw/taxonomicworkshop.htm



Deleatidium mayfly (Photo: Ken Miller)

OBITUARY
Jim Puckridge

Vale Jim Puckridge: One of Nature's Gentlemen

Members of ASL will be saddened to know that Jim Puckridge passed away on 6 June, after a long battle with Parkinson's Disease.

Jim was born in Port Lincoln in 1941. His family nurtured his childhood love for wild places, and sowed the seeds of Jim's life-long passion for nature. He studied English at The University of Adelaide, and was a school teacher for some years before returning to complete a PhD. This time, however, the subject was ecology.

Jim's thesis deserves to be a classic in the annals of freshwater ecology. It explored the ecology of fish in the Coongie Lakes— a boom-and-bust environment in remote northern South Australia. Fortuitously, his work began when there was a flood, but it was followed by another, and another, and with each flood the responses were compounded. After five years, the majestic explosions of fish, bird and invertebrate populations staggered the imagination. Jim learned to talk and write of orders of magnitude. He explored new horizons in statistical analysis and neural networks modelling, and would borrow as many desktop computers as he could, to leave them running overnight, or over weekends, until the routines had converged upon solutions.

Jim's PhD work embraced the DRY/WET project and later the AridFlo project, seeking ways to protect the rivers and lakes of central Australia from ill-considered development.

Jim was a wonderful poet. He wrote of boyhood days at Port Lincoln, of the Coongie Lakes and other wild places. His first collection, *Night Fishing*, was published in 2002. He often spoke to the media, and he wrote evocative articles that would stir anyone's inner spirit. Even in his technical writing, his sense of drama, his love for the wild world and his humanity would shine through. Some of his contributions remain on the Internet.

Jim was indeed one of nature's gentlemen. He was a man of nature, and a kindly, deeply caring and sensitive person. He strayed from conventional career paths that could easily have seen him retire as a teacher, as an academic researcher, or as a writer and poet, but he chose other paths. In all his endeavours, Jim succeeded in ways that perhaps he never knew. He was, and is, an inspiration.

Jim's illness struck in the mid-1990s. He was debilitated but fought hard, maintaining his research and later devoting his dwindling energy to vegetation conservation at a new home near Stokes Bay on Kangaroo Island. Even in his later days, when he was often incoherent, he could awaken to recite parts of Shakespeare.

To Jim's wife Philippa, to Dianna, sons Thornton and Jason, his brothers and sisters and friends in and out of academe, our profound sympathy.

Keith Walker

Coongie Lakes, South Australia

CONFERENCE REPORTS

NORTH AMERICAN BENTHOLOGICAL SOCIETY 56TH ANNUAL MEETING
Salt Lake City, Utah 25-30 May 2008

The 56th edition of the NABS meeting was held in Salt Lake City, Utah, with a number of sightings of Australian limnologists including (amongst others); **Andrew Boulton, Stuart Bunn, Chris Walsh, Mike Stewardson, Ross Thompson** and **Richard Norris**. With almost 1000 delegates present the meeting was a lively affair, and **Amber Clarke** and myself (along with most others) even succeeded in finding a few beers to drink in that most Mormon of cities. For the record the beer was rather good, once you had got over the fact that the local micro-brewery is called Squatters.

Perhaps the main take away point for me was the shift in emphasis away from the issues of northern Europe and the north-eastern United States (floods, eutrophication) towards issues that are more relevant to the developing parts of the world, and drier parts of the planet. **David Dudgeon** presented an excellent plenary session on aquatic conservation issues in south east Asia, and the work of his students in Hong Kong featured in the contributed sessions. Similarly, **Robert Twilley** described his work on coastal wetlands in Latin America within a context of managing against a backdrop of climate change. A recognition of the role of drought and drying in aquatic ecosystems was a feature of many talks, particularly those from the south eastern US.

The NABS award of excellence for 2008 went to **Dr Bobbi Peckarsky**, who many ASL members will know. Bobbi gave a typically up-beat presentation emphasising the importance of the 'ecology of place', reflecting her belief of the need to study 'long and deep' at particular locations.

Overall **Todd Crowl**, and **Chuck Hawkins** put together an excellent conference in a really beautiful setting. The next NABS meeting will occur in Grand Rapids, Michigan, May 17th-22th, 2009.

Ross Thompson

2nd SYMPOSIUM on URBAN STREAM ECOLOGY
Salt Lake City, Utah 22-23 May 2008

The 56th NABS meeting was preceded by the 2nd urban streams symposium, following on from the highly successful event host by **Chris Walsh** at Monash University in 2003. The workshop reviewed what new science has taken place since the last workshop and through a series of break-out groups sought to define the information gaps and future directions for research in urban stream ecology. Attended by ASLers **Chris Walsh**, **Mike Stewardson** and **Ross Thompson**, perhaps the most gratifying part of the workshop was the high degree of involvement from planners and engineers, who contributed greatly to the many animated discussions. The papers presented will appear in a special edition of JNABS early in 2009.

Ross Thompson

10TH INTERNATIONAL CONFERENCE ON SALT LAKE RESEARCH
Salt Lake City, Utah May 11-26 2008

The first conference of this series was hosted by **Bill Williams** in Adelaide in 1979. This 10th one was held in Salt Lake City, Utah, May 11-16, 2008 in association with a Forum with the Friends of Great Salt Lake. Not surprisingly there were lots of locals (87) and many Americans (140), but there were enough of us aliens (46) from 15 countries to give the international flavour. There would have been more of us, if USA wasn't so touchy on visas for some countries. Only five came from Australia (cf our dominance at the 9th conference in Perth); four are consultants and I am sometimes, thus highlighting the practical importance of saline lakes.

Great Salt Lake is of tremendous importance to Utah, both economically and environmentally to Utah. The salt is extracted for magnesium and potash production, as well as sodium chloride for industry and human consumption (we saw one company which makes salt for the organic market by mixing lake salt with a pile of local earth!) and of course there is production of most of the world's supply of brine shrimp eggs. It was not surprising them that there was a barrage of papers on Great Salt Lake (40 before I lost count), and the huge problems of the Salton Sea in California came in for multiple exposure too.

As is usual at these salt lake conferences, a wide range of subjects were covered: there were sessions on geology and geomorphology, salt chemistry, mercury and trace metals, physicochemical processes, micro-organisms, algae and cyanobacteria, invertebrates and fish, bird ecology, wetlands, biodiversity and conservation, and management and education. These were held in two parallel sessions, which generally were well segregated so that the lovers of life did not have to endure much water chemistry and vice versa. In addition there were plenary lectures each day on subjects as diverse as the depressing subject of conservation of world salt lakes and the fascinating 'why are the waters of hypersaline lakes red?'

There were too many extra-curricular activities to attend them all. Top of these was the conference banquet held at the place Bringham Young chose as 'this is the place' all those years ago. It was great evening, except for the guest speaker—a government bureaucrat who spoke all the lingo but without saying anything at all! Then there were a few special sessions on lake and bird photography as well as socials for post graduates. Talking of postgraduates, there were prizes for the best talk and poster; I was a judge, but never again, as almost all were of a super standard (much better than some old blokes I know) and it was so hard to differentiate, though I disqualified Americans who used imperial measurements in their science.

The venue was magnificent on the campus of Utah State University overlooking beautiful Salt Lake City and the Great Salt Lake in the distance. Most delegates stayed in the University Guest House and ate at the student dining hall, with the historic lecture rooms in between, thus allowing plenty of time for meeting delegates (to me this is the best arrangement for small international conferences—those where visitors live in separate hotels away from the meeting venue are inhospitable!). It was particularly interesting to talk to the friends of Great Salt Lake who ooze a passion for the lake and who are well educated in ecological matters and successful in advocacy.

Not surprisingly, the mid conference field trip was to the lake. We were able to paddle in the waters, catch brine shrimp, see brine flies and various waterbirds and on land be impressed by bison hulks. Not so good was a know-all public guide who mistook us for the normal ignorant tourists and tried to tell us all sorts of porkies. If he is any guide, too bad for accurate knowledge on the lake by American tourists.

The post conference field trip was a 3 day jaunt around the lake. Only about 15 went, but this meant for a cosy trip and much opportunity for talking and socialising. Although we saw lots of geomorphology (spits and ancient stranded beaches galore), some thromobolites (the locals thought they were stromatolites) and some extractive industries, not one aquatic invertebrate was encountered and seeing just one lake came a little boring at times. Our hosts were congenial and knowledgeable, but I wouldn't trust them on an expedition to outback Australia, because we ran out of gasoline and food!

Unlike the previous two salt lake conferences, plans are in place for the rapid publication of proceedings by early next year — 37 papers are being submitted and 18 extended abstracts, boding well for the most successful salt lake conference ever, except perhaps the first one. The title will be 'Saline Lakes around the World: Unique Systems with Unique Values' and the publisher University of Utah.

Brian Timms June 2008

*Upper left: Mormon temple, bottom left Arches National Park, right Colorado River, Utah (photos **Amber Clarke** and **Ross Thompson**)*

INFORMATION FOR MEMBERS

UPDATE ON THE ABRS ONLINE 'AUSTRALIAN FAUNAL DIRECTORY' (AFD)

Most of you will be aware that the Australian Biological Resources Study (ABRS) has been developing and maintaining an online database of Australia's fauna, the **Australian Faunal Directory**. (If you are unaware of it, go to www.environment.gov.au/biodiversity/abrs/online-resources/fauna/afd/index.html).

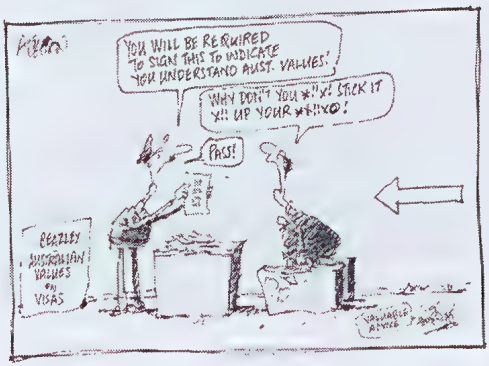
The Australian Faunal Directory derived initially from the *Zoological Catalogue of Australia* volumes. The data from those volumes was loaded online through the software package 'Platypus'. Since the original load there have been additions to, and updates of this checklist, including additions of previously unlisted major groups. AFD now includes over **78,000 species**, among which are most of the major inland water groups. The AFD will provide the core names list for the *Atlas of Living Australia*.

In a new development, the AFD has been moved to an Oracle platform, providing a new dynamic system for data entry and viewing by the public.

Maintaining the currency of the AFD is a major and continuous task. To facilitate this, ABRS is working to develop a means by which members of the scientific community will be given access to update specific sections of the database online, thus making it possible for individuals to contribute directly as new information becomes available.

In the meantime, ABRS invites you to look closely in the AFD at groups in which you have an interest, and let us know about any new publications or new classifications and any problems with any of the names in the database.

Alice Wells, ABRS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WHY DON'T YOU *!@%! STICK IT Y!!! UP YOUR ***!!XO!
PASS!
PEOPLES AUSTRALIAN VALUES ON VISAS

REPORTS FROM THE TRENCHES

MONASH FRESHWATER ECOLOGY RESEARCH GROUP, SCHOOL OF BIOLOGICAL SCIENCES

We are extremely excited at Monash to announce that **Professor Jenny Davis** will be joining us from Murdoch University as Professor in Aquatic Ecology. With the continuing active presence of Sam Lake, and a likely two new hires in this area in coming months, it will be great to see what new themes and ideas emerge.

It seems to be the season of bug picking, as Melbourne's grey clag settles in around the lab. To escape the weather **Ross Thompson** and **Amber Clarke** attended the NABS meeting (and Ross the associated urban streams symposium) in Salt Lake City. Amber's work on headwater streams (with Ralph Mac Nally, Sam Lake and Nick Bond) was really well received and fitted well with an emerging interest in those smaller systems (which some may uncharitably call 'drains'). **Beth Wallis** (Sam Lake) is in the final straits of writing up her thesis, as is **Karen Cooper** (Sam Lake, Ralph Mac Nally and Gerry Quinn), working on her ISC study. **Susie Ho** (Nick Bond and Ross Thompson) has been in the midst of picking samples and SIA processing of her food webs from the Ovens floodplain pools where she has been finding interesting interactions between carp gudgeon and Gambusia. Also wielding the SIA grinder has been Honours student **Darren Gilling** (Ross Thompson and Paul Reich) who has been investigating the effects of riparian revegetation on yabbies. All of this of course fits rather nicely within **Paul Reich** and **Sam Lake**'s ongoing MDBC-funded work on the effects of riparian revege on lowland streams, work that has now been joined by soil ecologist **Tim Cavagnaro**, and which has been assisted as ever by the ongoing work of **Matt Johnson** and **Thomas Daniel** (ie the people who do the ACTUAL work). Working in the same system PhD student **Mardiana Ali** (Ross Thompson and Mike Grace) is ready to commence another round of sampling in her work on the effects of *Typha* on nutrient dynamics and food web structure. Urban systems are also in the firing line with **Sam Imberger** (Ross Thompson and Mike Grace) continuing her work on functional indicators in urban streams, with Honours student **Erinn Richmond** (Ross Thompson and Mike Grace) working in many of the same sites. Downstream effects of urbanization on streams have been in Ross' thoughts lately, with much media attention aimed at his Honours student **Alissa Monks**' findings of mercury contamination in dolphins in Port Phillip Bay.
Ross recently visited China with **Mike Grace**, **Perran Cook** and **John Beardall**, and found similar ecotoxicological issues very much on the radar. On a less poisonous note **John Morringiello** (Nick Bond, Dave Crook and Bob Wong) is making some significant progress on his study of the life history traits of carp gudgeon, with bath tubs of the little beasties a major feature of Monash's new aquatic research facility. Major projects continue to proceed apace, with **Nick Bond's** work for eWater keeping him busy (with only a little bit of groaning about the work that the end of the financial year brings. **Elisa Rawlings** has rejoined us from maternity leave and with **Kay Morris** is starting to get some data on our wetlands restoration project. **Damien McMaster** together with Paul, Sam and Nick continue to work on the Broken-Boosey system.

Ross Thompson

AUSTRALIAN CENTRE FOR TROPICAL FRESHWATER RESEARCH, JAMES COOK UNIVERSITY, TOWNSVILLE

After many years on staff, **Damien Burrows** has been appointed as the new Director of ACTFR for the next two years.

Three staff have moved on this year - **Dom Loong** has joined the TRACK team at Charles Darwin University; **Leo Lymburner** has joined GeoScience Australia, Canberra and **Vern Veitch** has been elected to the local council, a full-time job (and more). At least Vern is chair of the council's Environment and Sustainability Committee so his knowledge will be useful in that capacity. We have welcomed **Rob Doupe, Michelle Devlin** and **Lionel Glendening** to our staff. Rob has come from Murdoch University is working on the impact of the exotic fish tilapia, impacts of feral pigs and several freshwater turtle projects. Michelle returns to ACTFR after stints at AIMS, GBRMPA and working in Europe and is studying flood plumes and their fate in the marine environments of the Great Barrier Reef. Lionel has joined the ACTFR staff as water quality scientist and manager of our water quality laboratory. Lionel has formerly worked as a research chemist in fisheries science for WA Fisheries, and in various commercial water quality laboratories. **Eric Wolanski** has also joined ACTFR after an internationally distinguished career at the Australian Institute of Marine Science (AIMS) as an oceanographer and aquatic ecosystem modeler.

Eric Wolanski hosted **Jonathan Lambrechts** from the Catholic University of Louvain in Belgium, working on setting up the SLIM hydrographic model. The SLIM model in a one-million variable-sized grid point that can model the entire Great Barrier Reef (with grids as small as 200m) if you have enough computing power (up to 30 processors running simultaneously - I'll just stick to catching fish). Eric has also finished a project working in Florida where he modeled sediment resuspension in Lake Apopka, Florida's fourth largest lake. Eric has also recently returned from Capetown, South Africa, where he was invited speaker at the IGBP conference. **Jon Brodie** has continued his work on runoff from PNG oil palm plantations this year and **George Lukacs** recently attended the SWS conference in the USA.

Damien Burrows and **Colton Perna** are nearing the end of the final reports for the Northern Australia Freshwater Fish project – a three-year project with Australian Rivers Institute, NT Fisheries and **Dave Morgan** (Murdoch Uni). See details under the 'fish atlas' link on our website http://www.actfr.jcu.edu.au/

Caroline Chong has submitted her PhD on riparian vegetation and now has a post-doc at CSIRO Murray-Darling Waterways Restoration program in Canberra.

Tilapia (this time *Tilapia mariae*) have now been confirmed as established in a waterway of the Gulf of Carpentaria. They were discovered in Eureka Creek, a tributary of the Walsh River, which then runs into the Mitchell River in northern Queensland, earlier this year. Adults and recently-spawned juveniles have been found with over 300 now caught. We have had teams up there attempting to fish-down the infestation along with staff from Qld DPIF. This work has been hindered by the late and strong wet season flows in the creek. Fortunately, the population appears contained to Eureka Creek at this stage, though it is still early days.

Damien Burrows

SUSTAINABLE RIVERS AUDIT, MURRAY-DARLING BASIN COMMISSION

The Sustainable Rivers Audit (SRA) team consisting of **Robyn Johnston, Michael Wilson, Mathew Maliel, Frederick Bouckaert, Kara Boughton** and **Greg Long** have been very busy with two major achievements for the SRA program: the first three-yearly SRA Report and the business case for adding vegetation and physical form indicator themes for the next basin-wide SRA assessment report due in 2011.

This has culminated in the release of the comprehensive *SRA Report 1* and the accompanying SRA summary report in June 2008 and in the Ministerial Council decision in May 2008 to add vegetation and physical form themes to the audit program.

The *SRA Report 1* provides assessment of river health in all 23 valleys of the Murray-Darling Basin, based on indicators for fish, macroinvertebrates and hydrology. The Audit was based on quantitative data collected from across the Basin by state jurisdictions.

Based on indicators for the condition of fish, macroinvertebrates and hydrology, the Independent Sustainable Rivers Audit Group (**Peter E. Davies, Terry Hillman, Keith Walker** and **John Harris**) assessed river health for each of the 23 valleys, including a ranking of their current condition compared to reference condition. SRA reference condition is defined as the condition of the rivers in the absence of significant human impacts, and is determined through a combination of expert knowledge, previous research, museum records and historical data.

The audit results indicate that only the Paroo valley was in good health, and the Border Rivers and Condamine valleys were in moderate health. Seven other Basin valleys were in poor health and 13 were in very poor health. The full SRA report and the summary report are available at:
http://www.mdbc.gov.au/SRA/river_health_check_-_sra_reprt_one
The SRA data can be made available upon request.

As an ongoing program, fish and macroinvertebrate data are being collected for 2007-2008 by the State jurisdictions. Protocols for vegetation and physical form are being developed for testing in the Namoi prior to the commencement of data collection for these two themes in earnest in 2009. Fish and macroinvertebrate sampling staff from the various state agencies will have the opportunity to meet at the SRA general meeting in Toowoomba scheduled for 30-31 July.

Frederick Bouckaert

SCIENCE DIVISION, DEPARTMENT OF ENVIRONMENT AND CONSERVATION, WESTERN AUSTRALIA.

Department of Environment and Conservation

2008 looks to be a busy field season for us with numerous projects, new and current, underway.

The Avon Baselining Project is moving along steadily, **Anna Leung** and **Danielle Halliday** have completed the 2007 season of fieldwork, encompassing, water quality, water bird counts and aquatic invertebrate sampling. With the assistance of **Cara Francis** all samples have now been processed and a literature review of the effects of drainage water on wetland biota is underway. **Susan Jones** is currently completing the modeling components of the assessment as well as commencing the regional assessment of the conservation significance of the mapped wetlands. Susan is also starting with the next phase of the project, where a framework for undertaking wetland-scale assessments will be implemented and field-tested by herself, Cara and Dani.

Karen Sutcliffe took over the Forest Stream Project in 2007 and together with **Kirsty Quinlan** completed the third season of sampling for the project, recording water quality and live-picking aquatic macroinvertebrates. In 2008 **Melita Pennifold** has taken over the project and is currently finishing off identifications, data entry and data analysis on the 2007 samples, as well as preparing for the 2008 fieldwork. This spring Melita will undertake the fourth year of sampling invertebrates at 50 Jarrah and Karri Forest sites that were selected to represent a range of land management practices (logging, fire, damming, and agriculture).

On the Wheatbelt Wetlands Monitoring Project **David Cale** has completed the 2007 sampling while he and Ross Gordon are processing samples from the 2006 round. After 10 years of monitoring 25 wetlands, previously uncollected species are still regularly turning up (at the wetland and regional scale) showing the value of long term work for biodiversity assessment. As a side project Dave has also studied aquatic invertebrate diversity within a small catchment surrounding one his long term sites to look at small scale patterning following a significant rainfall event in 2006.

The Hutt Catchment Biodiversity Survey is progressing nicely, Dave Cale sampled 15 sites in September 2007, and three of these plus one extra site were sampled by Adrian and Kirsty in February 2008. The Hutt River is less saline in summer due to lowland freshwater springs becoming dominant over flows from the saline upper catchment. Kirsty has completed sorting all the samples, and with the assistance of Adrian and Cara, has finished identifying all aquatic invertebrates. With the data analysis underway the project is due for completion in mid-2008.

The wetlands group has taken on two new projects for 08/09: the Resource Condition Monitoring Project and a project that aims to investigate relationships between aquatic invertebrates and characteristics of Pilbara river pools that may be affected by groundwater abstraction. The latter will contribute to models of ecological water requirements. To this end **Adrian Pinder** and **Anna Leung** will reanalyze data from the Pilbara Biological Survey, modeling pool invertebrate assemblages against habitat variables. They will undertake fieldwork in spring to test and refine the models and to assess conservation values of particular river pools.

The Resource Condition Monitoring project, being run by **Mike Coote** and **Glen Daniel** of the Department's Nature Conservation Division is part of an NHT2/NAP funded Statewide Resource Condition Monitoring project. The wetland component of this project will comprise setting up 25 wetland condition monitoring points across Western Australia. This project will assess current condition, looking at aquatic invertebrate diversity, water quality and aquatic and riparian vegetation diversity and condition. The fieldwork for the Pilbara and Kimberley sites was completed in April and May by Adrian, Susan, Mike and Glen. In early spring they will head out and sample the remaining sites located in the Goldfields, deserts and northern agricultural regions.

The Science Division wetlands group has collaborated with the Nature Conservation Division wetlands group on several other projects. Dave and Adrian have been assisting **Anna Nowicki** and **Lien Sim** to road-test the National Wetland Indicators using 10 years of monitoring data from the Wheatbelt Wetlands Monitoring Project. Susan is also continuing to work with **John Lizamore**, combining work on the Avon Baselining Project and a project to establish guidelines for assessing drainage proposals in the Wheatbelt.

Finally, thanks to **Brendan Cale,** our specimens are safe! Brendan is diligently curating invertebrate specimens from old projects previously in boxes of drying vials. Many of these are from remote locations but not yet identified so potentially very valuable.

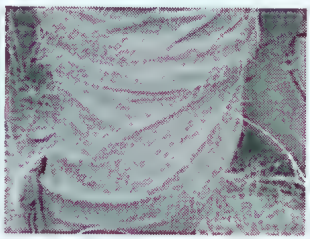
Danielle Halliday

(Danielle wins a (metaphorical) prize for producing a perfectly formatted version of her report .... complete with bolded names and the right fonts!! ed. Is very grateful).

AQUATIC ECOSYSTEMS UNIT, DEPARTMENT OF NATURAL RESOURCES AND WATER LONG POCKET LABORATORIES, INDOOROOPILLY, QUEENSLAND

Queensland Government

Not too many updates to report on, as many staff are currently out and about in the field battling crocodiles and snakes.



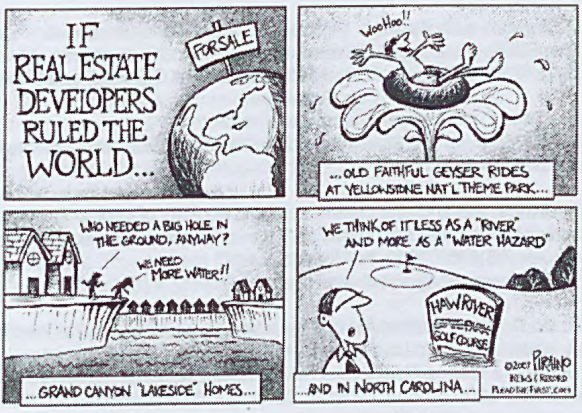
The Stream and Estuary Assessment Program (SEAP) 2 month field sampling schedule in the Central Bioprovince is coming to an end with **Jo Blessing** and **Louisa Davis** undertaking the last 10 day trip as we speak. **Pete Negus, Alisha Steward, Jon Marshall** and other NRW regional and policy staff were also involved. The usual field trip problems occurred, such as 1) encountering sites that are dry, 2) not being able to access sites, and 3) trying to find sites with water *and* access *and* that are in reference condition! Some trips proved to be "better" than others, such as the team of 4 girls making overnight stays in Airlie Beach, and having posh meals with wine every other night in Mackay. Other trips were less pleasant, involving an allergic reaction to several leech bites and an encounter with a field of 2 metre high cobblers pegs (see photo showing high density of cobblers pegs on a leg). The stunning scenery of Blackdown Tableland National Park west of Rockhampton (see photo) eased the pain somewhat. A missing wheel

brace on one trip proved to be rather "irritating" (to be polite) after a flat tyre was encountered on a lonely, remote dirt road... ah, the memories. Once field work is over, it will then be into lab work and data analysis with **Pete** left for a little while to do the lot while **Jo** and **Louisa** flit off around the world. Condition and risk reports are due to be available at the end of the year.

The Qld FARWH trials project is finishing up its 12 weeks of fieldwork in North Queensland. **Dean Holloway**, **Bill Senior**, **Annette Ritchie**, **Catherine Simpson**, **Glenn McGregor** and **Diane Conrick** have been wandering the tracks of North Queensland's Pioneer and Burdekin catchments searching for sites to measure macroinvertebrates, riparian condition, water quality and substrate condition. Then it's back to the lab to process samples and prepare for the next round of trials in South-east Queensland. Never-ending fun!!

This will be my last stint putting together our snippet for NRW, as I am planning to start a PhD soon on dry stream ecology at Griffith Uni. I'm looking forward to being eligible for student discounts again! **Pete** has offered to take over the newsletter contributions - thanks **Pete**.

Alisha Steward


IF REAL ESTATE DEVELOPERS RULED THE WORLD...
FOR SALE
WHO NEEDED A BIG HOLE IN THE GROUND, ANYWAY?
WE NEED MORE WATER!!
...GRAND CANYON "LAKESIDE" HOMES...
WooHoo!!
...OLD FAITHFUL GEYSER RIDES AT YELLOWSTONE NAT'L THEME PARK...
WE THINK OF IT LESS AS A "RIVER" AND MORE AS A "WATER HAZARD"
HAWTHORN GOLF COURSE
...AND IN NORTH CAROLINA...

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